

Amendments to the Claims

A complete list of all the presently or formerly pending claims in the application is provided below, with suitable headings to show the status of each claim and, where appropriate, its current text.

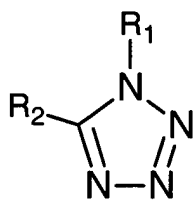
1. (Currently Amended) A process for preparing roughened copper surfaces suitable for subsequent multilayer lamination, said process comprising the steps of: contacting with a clean copper surface an adhesion promoting composition under conditions effective to provide a roughened copper surface, said adhesion promoting composition consisting essentially of:

hydrogen peroxide[[],];

a pH adjuster[[],];

~~a topography modifier,~~ a 5-membered aromatic fused N-heterocyclic ring compound, wherein the N-heterocyclic ring has a nitrogen atom at position 1 bonded to a hydrogen atom; and

a uniformity enhancer[[],] having the formula:



wherein R1 and R2 are independently selected from hydrogen or hydroxyl, amino, alkyl, hydroxyalkyl, aminoalkyl, nitroalkyl, mercaptoalkyl, or alkoxy groups;

~~and wherein said adhesion promoting composition is~~ at least essentially free of halogen ions.

2. (Previously Presented) The process according to claim 1, wherein said process is preceded with the step of cleaning said copper surface.
3. (Original) The process according to claim 1, wherein said process further comprises the step of contacting the uniform roughened copper surface with a post-dip.
4. (Original) The process according to claim 3, wherein said post-dip comprises an azole or silane compound or a combination of said azole and said silane.
5. (Original) The process according to claim 4, wherein said post-dip further comprises a titanate, zirconate, aluminate or a combination of said titanate, zirconate and aluminate.
6. (Original) The process of claim 4, wherein said silane is selected from the group consisting essentially of
3-methylacryloyloxypropyltrimethoxysilane,
3-(N-styrylmethyl-2-aminoethylamino) propyltrimethoxysilane hydrochloride,
3-(N-allyl-2-aminoethylamino)-propyltrimethoxysilane hydrochloride,
N-(styrylmethyl)-3-aminopropyltrimethoxysilane hydrochloride,

N-2-aminoethyl-3-aminopropyltrimethoxysilane,
 3-(N-Benzyl-2-aminoethylamino)-propyltrimethoxy silane hydrochloride,
 beta-(3,4-epoxycyclohexyl) ethyltrimethoxysilane, gamma-aminopropyl-triethoxy
 silane,
 gamma-glycidoxypentyltrimethoxysilane, and
 vinyltrimethoxysilane.

7. (Original) The process of claim 5, wherein said titanate is selected from the group comprising titanate amine, tetraoctyl di(ditridecyl)phosphito titanate, tetra(2,2-diallyloxymethyl) butyl-di(ditridecyl)phosphito titanate, and neopentyl(diallyl)oxytri(dioctyl)pyrophosphatotitanate, and neopentyl(diallyl)oxytri-(m-amino)phenyl titanate.
8. (Previously Presented) The process of claim 5, wherein said zirconate is selected from the group comprising tetra (2,2 diallyloxymethyl)butyl, di(ditridecyl)phosphito zirconate, neopentyl(diallyl)oxy, trineodecanoyl zirconate, neopentyl(diallyl)oxy, tri(dodecyl)benzene-sulfonyl zirconate, tetra (2,2 diallyloxymethyl)butyl-di(ditridecyl)phosphito zirconate, and zirconium IV 2,2-dimethyl 1,3-propanediol.
9. (Original) The process of claim 5, wherein said aluminate is selected from the group comprising diisobutyl(oleyl)acetoacetylaluminate, and diisopropyl(oleyl)acetoacetyl aluminate.

10. (Original) The process according to claim 1, wherein said uniformity enhancer is 5-aminotetrazole.
11. (Original) The process according to claim 1, wherein said adhesion promoting composition further consists essentially of a copper salt.
12. (Previously Presented) The process according to claim 21, wherein said step of cleaning said copper surface further comprises the step of draining excess cleaning solution from the copper surface.
- 13-20. (Canceled)
21. (Previously Presented) The process according to claim 2, wherein said step of cleaning said copper surface comprises the step of applying a cleaning solution to said copper surface.
22. (New) The process according to claim 1, wherein said uniformity enhancer is selected from the group consisting of 5-aminotetrazole; 5-methyltetrazole; 5-methylaminotetrazole; 1H-tetrazol-5-amine; 1H-tetrazol-5-amine, N,N-dimethyl-; 1-methyltetrazole; 1-methyl-5-mercaptopotetrazole, 1,5-dimethyltetrazole; 1-methyl-5-aminotetrazole; and 1-methyl-5-methylamino-tetrazole.